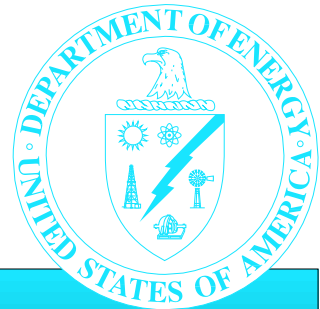


Rocky Flats Environmental Technology Site

Safeguards and Security Profile Summary Analysis

June 1997



Office of Environment, Safety and Health

Introduction

The Department of Energy (DOE) Office of Environment, Safety, and Health has just completed a review of the current safeguards and security posture at the Department's Rocky Flats Environmental Technology Site, located near Denver, Colorado. This review was conducted as part of a recent initiative to characterize the current status of safeguards and security programs throughout the Department.

This summary analysis, presented here in unclassified form, describes the safeguards and security posture and the overall status of safeguards and security program management at Rocky Flats as of April 1997, the period during which data were collected to characterize the site. It reflects the independent perspective of the Assistant Secretary for Environment, Safety, and Health, who provides the Secretary of Energy with assessments of the Department's performance in the areas of environmental protection, safety, health, and safeguards and security, using the independent Office of Oversight.

Major Conclusions

The Office of Environment, Safety, and Health has drawn the following major conclusions concerning the overall status of safeguards and security at Rocky Flats:

- The security concerns at Rocky Flats, while some are significant, do not put special nuclear material at immediate risk of theft. The concerns identified at Rocky Flats represent a reduction in the effectiveness of the defense-in-depth protection design, but do not constitute a pathway through the multiple layers.
- Safeguards and security at Rocky Flats must receive consistent management emphasis, rather than “on again, off again” support.
- The DOE Federal safeguards and security staff at Rocky Flats needs stability, strong leadership, and improved coordination with site operations.
- Despite concerns with program effectiveness and program management, genuine progress has been made in the last year in mitigating some previously identified safeguards and security problems at Rocky Flats.

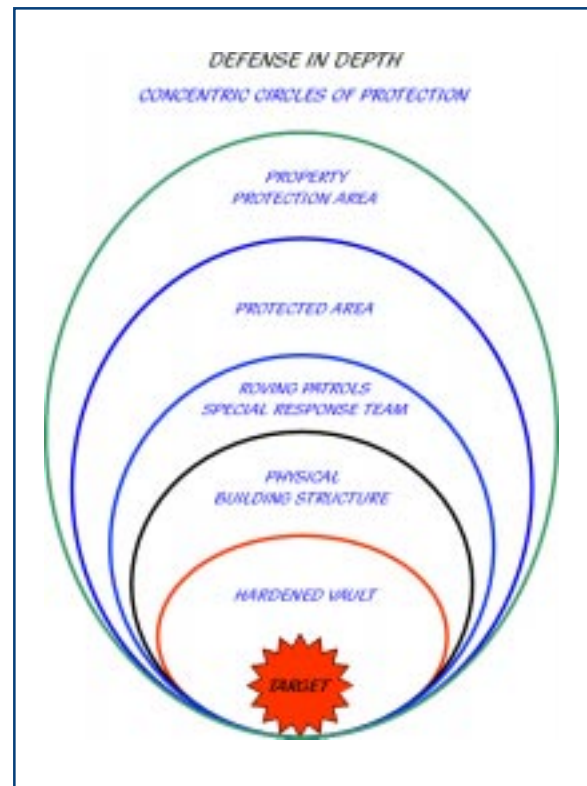
Each of these conclusions will be discussed below in greater detail.

No Immediate Risk, But Some Significant Concerns

The security concerns at Rocky Flats, while some are significant, do not put special nuclear material at immediate risk of theft.

The Office of Security Evaluations believes that there are significant security concerns at Rocky Flats. The most urgent deficiencies are primarily the result of flawed administrative procedures. In response to these concerns, Rocky Flats management has already initiated a review of these procedures and is in the process of developing revisions that will correct the identified deficiencies.

Although these concerns are serious and demand prompt resolution, they do not constitute an immediate risk to special nuclear material. DOE requires that special nuclear material be protected by a security system composed of multiple layers of barriers, alarm systems, and armed guards—in effect, a series of concentric circles of protection surrounding the target material. The system is designed so that failure of one or more of these layers should not equate to adversary success. In other words, the DOE approach demands defense-in-depth for its most critical assets. The concerns identified at Rocky Flats represent a reduction in the effectiveness of this defense-in-depth protection design, but do not constitute a pathway through these multiple layers.



The underlying issue at Rocky Flats has been lack of confidence in the ability of the safeguards and security system to perform as designed. Furthermore, there has been a lack of confidence in the ability of the Rocky Flats management to identify system weaknesses and to fix them in a timely manner. In addition to requiring multiple layers of protection, DOE also requires that these protective layers be tested and analyzed on a regular basis to ensure the effective performance of each

layer, singly and in combination. It is through this combination of layered protection and extensive testing, analysis, and self-assessment that the Department provides adequate assurance that the public interest is properly protected.

The required performance testing and analysis effort includes many components. The performance test program includes tests that range from small scale tests of individual system components, such as security alarms, all the way to comprehensive tests of the entire security system, such as a security response to a simulated adversary attack. The performance analysis program considers the results of performance tests, sophisticated computer-based analyses, and a variety of other inputs in reaching conclusions about the effectiveness of the overall security system at a site.

During the period from 1994 to 1996, Rocky Flats fell behind in its performance testing and analysis program. In 1996, all responsible reviewing offices, both at Rocky Flats and at DOE Headquarters, agreed that the proposed update to the site's safeguards and security plan was unacceptable. The basis for this conclusion was that the plan was not based upon current performance test data and that the analysis conducted in support of the plan did not fully consider the range of actions a terrorist group might take in attacking Rocky Flats. In its August 1996 review of the safeguards and security

management program at Rocky Flats, the Office of Security Evaluations focused on this problem, observing that until better test data and a more comprehensive analysis was available, there was no firm basis for believing that the protection system would perform effectively.

In response to this issue, Rocky Flats increased its efforts to analyze and performance-test its protection strategy. With the support of the Offices of Environmental Management and Defense Programs, the two Headquarters program offices most closely involved with the line management of Rocky Flats, a new round of more rigorous performance tests and analyses were conducted, leading to the development of a new and more solidly grounded site safeguards and security plan. Although the results of these performance tests were less than uniformly satisfactory, the deficiencies they revealed have now been taken into consideration as part of the effort to improve the safeguards and security program.

The current draft version of the site safeguards and security plan is undergoing verification and validation by the Department's Rocky Flats Field Office, the aforementioned Headquarters program offices, and the Headquarters safeguards and security policymaking element, the Office of Nonproliferation and National Security. Successful completion of this process should contribute significantly to renewed confidence in the overall posture of safeguards and security at Rocky Flats.

Need For Consistent Management Emphasis

Viewed within the context of years of safeguards and security program evaluations at Rocky Flats, the results of this profile effort underscore the point that **security must receive consistent management emphasis, rather than “on again, off again” support.** Shifting emphasis with respect to safeguards and security programs is nothing new to Rocky Flats. In the 1980s, the emphasis was upon a general buildup of security capabilities to protect the Rocky Flats mission of producing nuclear weapons components. In the 1990s, Rocky Flats has moved from its former production mission to decontamination and decommissioning of facilities as steps leading to the ultimate closure of the site. The shift in mission has been mirrored by numerous shifts in safeguards and security emphasis as Rocky Flats has attempted to redefine its overall operational mission and requirements. This became particularly evident after 1991, when the nuclear weapons production mission formally ended.

A review of Office of Security Evaluations reports on Rocky Flats for the period from 1991 to 1996 reveals the impact of these shifting priorities. The 1991 report concluded that “the protection program at Rocky Flats suffers from a history of inadequate management support for safeguards and security.” Although the

report noted significant progress in “correcting existing vulnerabilities in the protection of special nuclear material,” it pointed to weaknesses in the security planning process and questioned the extent to which Rocky Flats had addressed the actual causes of the identified vulnerabilities.

The 1992 evaluation took the form of a limited scope “special inspection,” designed to measure the progress made by Rocky Flats in addressing the 1991 deficiencies. The report noted progress in correcting many specific protection deficiencies, but expressed less confidence in protection program management, which was once again rated MARGINAL. The 1992 report again called attention to the need for a safeguards and security management program that could look beyond short-term fixes and find a means of establishing a solid foundation for long-term success.

The 1994 evaluation emphasized what had by then emerged as a consistent theme. The report indicated that while management support meant progress in fixing high profile problems, “planning at Rocky Flats is generally reactive rather than proactive and has not been responsive to the rapid changes in mission and resource reductions.” Furthermore, the report emphasized concerns that essential physical security system upgrades were about to become the casualty of a withdrawal of funding.

These concerns proved valid and symbolized a general decline in management support for safeguards and security at Rocky Flats during 1994 and 1995. These years marked yet another of those abrupt shifts in priority, when safeguards and security issues were subordinated by the DOE's Rocky Flats management to other program priorities. Compounding this problem was the transition to a new site operations contractor team, whose management initially did not sufficiently appreciate the scope of the safeguards and security issues at Rocky Flats.

The results of this lack of consistent management support were clearly evident when the Office of Oversight returned to Rocky Flats in August 1996. Although new managers were beginning to grapple with the many and varied safeguards and security program issues, the safeguards and security program itself was showing the full impact of years of fluctuation in management support. Needed security upgrades had not progressed as rapidly as anticipated. Essential security support functions were becoming less effective. And system testing and analysis, as noted above, was falling behind.

Among the issues arising out of the period of decline in 1994 and 1995 were several

safeguards and security concerns that became the substance of a "whistleblower" activity at Rocky Flats. These concerns were reviewed by the Office of Oversight in the course of preparing this profile. Some of these concerns had been acknowledged and addressed by Rocky Flats management. Others had been resolved as a result of other changes, such as the modification of facility missions or the removal of sensitive target material. Still others are currently being considered by Rocky Flats management. Regardless of the outcome of the specific issues, the desire of the "whistleblowers" to call attention to the need for renewed emphasis on safeguards and security at Rocky Flats had some merit.

Although current Rocky Flats management is working hard to finally set the program on a proper foundation, outside observers have some basis for skepticism about the final result—Rocky Flats, after all, has a long history of improving its protective systems only to allow them to degrade once again when priorities shift or external pressures abate. Turning the program around, once and for all, will depend on steady management attention and may require more creative and emphatic intervention by the Department's highest level managers.

Need For Stability, Leadership, and Improved Coordination

Regardless of any other measures that may be taken by senior management, **the DOE Federal safeguards and security staff at Rocky Flats needs stability, strong leadership, and improved coordination with site operations.** The position of the DOE safeguards and security director, the key safeguards and security management position at Rocky Flats, has been characterized by temporary occupancy and high turnover for the past several years. The last safeguards and security director resigned after only three months in the position, professing his frustration at the apparent enormity of the management issues he had confronted. His recent predecessors typically have had similarly short tenures. High turnover at the management level has been accompanied by recent upheavals at the staff level. The problem is compounded

by the widespread perception that safeguards and security is not a priority at Rocky Flats.

If the Rocky Flats safeguards and security program is to achieve self-sustaining quality—quality that can be maintained *without external pressure* for the remaining life of the Rocky Flats site—then the safeguards and security function will need strong and stable leadership, not only from the occupant of the safeguards and security director's position, but from higher DOE management, at Rocky Flats and at Headquarters, and also from the primary site operational contractor and its principal subcontractors. All management elements must combine to ensure that safeguards and security is treated as an integral element in the larger environmental restoration and closure mission, rather than as an impediment to the achievement of that mission.

Genuine Progress Has Been Made

Despite concerns with program effectiveness and program management, genuine progress has been made in the last year toward mitigating previously identified safeguards and security problems at Rocky Flats.

Evidence of this progress may be found in the area of physical security systems, where the final installation of a major component in the site's alarm system marks a major step toward completion of the decade-old general physical security system upgrade. Significant progress has been made in self-assessments, in performance testing, and in moving toward completion of a full inventory of the site's special nuclear material holdings. The primary site management contractor has augmented its safeguards and security staff, both in numbers and in quality. The consolidation of special nuclear material and classified information has made it possible, in some instances, to focus safeguards and security resources more efficiently.

The most notable change at Rocky Flats, however, is a change in attitude. A major reason for the progress currently being made in addressing longstanding safeguards and security program issues is the evident willingness of current Rocky Flats managers, both DOE and contractor, to acknowledge the existence of serious problems and to accept the need for energetic action to resolve them. There are many safeguards and security problems at Rocky Flats that remain outstanding, but, *so long as the current attitude persists*, these problems should be solved. To ensure that progress is sustained, the responsible DOE Headquarters program office (Environmental Management) together with the Department of Energy Safeguards and Security Policy Office (Nonproliferation and National Security) should work with the Rocky Flats safeguards and security program, and the Office of Security Evaluations should continue to conduct independent oversight activities on a more frequent basis at Rocky Flats.